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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
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PATENT APPLICATION

ATTORNEY DOCKET NO. 10014648-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): William D. Holland

Confirmation No.: 1436

Application No.: 10/699,011

Examiner: Bernard Krasnic

Filing Date: October 31, 2003

Group Art Unit: 2824

Title:

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on December 27, 2007.

☒ The fee for filing this Appeal Brief is $510.00 (37 CFR 41.20).

☐ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month $120	☐ 2nd Month $460	☐ 3rd Month $1050	☐ 4th Month $1640

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $ 510. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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Date of facsimile: 2/27/08
Typed Name: Natalie King
Signature:

Respectfully submitted,
William D. Holland
By
James D. Shaurette
Attorney/Agent for Applicant(s)
Reg No.: 39,833
Date: 2/27/08
Telephone: 509-624-4276

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/699,011
Filing Date..... October 31, 2003
Inventor..... William D. Holland
Assignee..... Hewlett-Packard Development Company, L.P.
Group Art Unit 2624
Examiner..... Bernard Kransic
Attorney's Docket No. ..... PDNO. 10014648-1
Confirmation No..... 1436
Title: Hard Imaging Methods and Devices and Optical Scanning Systems

BRIEF OF APPELLANT

To: Mail Stop Appeal Brief-Patents
Commissioner of Patents
P.O. Box 1450
Alexandria VA 22313-1450

From: James D. Shaurette (Tel. 509-624-4276; Fax 509-838-3424)
Wells, St. John, P.S.
601 W. First Avenue, Suite 1300
Spokane, WA 99201-3817

Appellant appeals from the Office Action mailed September 27, 2007 (hereinafter "Final Office Action" or "Action"). The Commissioner is authorized to charge the fee required under 37 C.F.R. § 41.20(b)(2) to Deposit Account No. 08-2025.

Appellant appreciates the withdrawal of the 101 rejection and the withdrawal of the objection to the Abstract in the Advisory Action mailed January 23, 2008 (hereinafter "Advisory Action").

02/29/2008 PCHOMP 00000007 082025 10699011
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I. REAL PARTY IN INTEREST

The real party in interest of this application is Hewlett-Packard Development Company, L.P. as evidenced by the full assignment of the pending application to Hewlett-Packard Development Company, L.P. recorded starting at Reel 014631, Frames 0811 and 0815, in the Assignment Branch of the Patent and Trademark Office. The Hewlett-Packard Development Company, L.P., is a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. RELATED APPEALS AND INTERFERENCES

Appellant, Appellant's undersigned legal representative, and the assignee of the pending application are aware of no appeals or interferences which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF THE CLAIMS

Claims 1-7, 13-23, and 27-38 are pending and claims 8-12 and 24-26 are canceled. Claims 1-7, 13-23, and 27-38 stand rejected. Appellant appeals the rejections of claims 1-7, 13-23, and 27-38.

IV. STATUS OF AMENDMENTS

An amendment was filed with the Notice of Appeal on December 27, 2007 and was entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Concise explanations of the subject matter defined in each of the independent claims and argued dependent claims involved in the appeal follow with respect to exemplary illustrative embodiments of the specification and figures.

Referring to independent claim 1, accessing of image data is described in one embodiment at page 12, line 16 of the specification. Generating light is discussed

at page 5, line 24 according to one embodiment. Scanning of light is found on page 6, line 14 according to one embodiment. Correction data is described at page 8, line 23 according to one embodiment. Modifying the image data is described at page 9, line 5 according to one embodiment.

Referring to dependent claim 2, rasterization is described at page 10, line 18 according to one embodiment.

Referring to dependent claim 6, a raster image processor is described in one embodiment at page 9, line 8.

Referring to independent claim 13, processing circuitry is described at page 4, line 19 according to one embodiment. Accessing of image data is described in one embodiment at page 12, line 16 of the specification. Correction data is described at page 8, line 23 according to one embodiment. Modifying the image data is described at page 9, line 5 according to one embodiment.

Referring to dependent claim 14, a raster image processor is described in one embodiment at page 9, line 8.

Referring to dependent claim 15, rasterization is described at page 10, line 18 according to one embodiment.

Referring to independent claim 18, an optical scanning system is described at page 5, line 14 according to one embodiment. Generating light is discussed at page 5, line 24 according to one embodiment. Direction of light is found on page 6, line 14 according to one embodiment. Processing circuitry is described at page 4, line 19 according to one embodiment. Modifying the image data is described at page 9, line 5 according to one embodiment.

Referring to dependent claim 21, a raster image processor is described in one embodiment at page 9, line 8.

Referring to dependent claim 22, rasterization is described at page 10, line 18 according to one embodiment.

Referring to independent claim 27, an article of manufacture and computer readable medium are described at page 4, line 30 according to one embodiment. Accessing of image data is described in one embodiment at page 12, line 16 of the specification. Correction data is described at page 8, line 23 according to one embodiment. Modifying the image data is described at page 9, line 5 according to

one embodiment. Outputting is described at page 12, line 1 according to one embodiment.

Referring to dependent claim 30, a raster image processor is described in one embodiment at page 9, line 8.

Referring to dependent claim 31, modification of content is described at page 12, line 8 according to one embodiment.

Referring to dependent claim 32, accessing of image data is described in one embodiment at page 12, line 16 of the specification. Modification of content is described at page 12, line 8 according to one embodiment.

Referring to dependent claim 33, modification of an object is described at page 10, line 17 according to one embodiment.

Referring to dependent claim 34, outputting data at a constant rate is described at page 12, line 8 according to one embodiment.

Referring to dependent claim 35, modification of content is described at page 12, line 8 according to one embodiment.

Referring to dependent claim 36, rasterization is described at page 10, line 18 according to one embodiment.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. The 102 rejection of claims 1, 3-5, 7 and 31-33 over Ishigami.

B. The 102 rejection of claims 13, 16 and 37 over Ishigami.

C. The 102 rejection of claims 18-19 and 23 over Ishigami.

D. The 102 rejection of claims 27-28 over Ishigami.

E. The 103 rejection of claim 2 over Ishigami or Chase.

F. The 103 rejection of claims 6, 14, and 30 over Ishigami or Chase.

G. The 103 rejection of claim 21 over Ishigami or Chase.

H. The 103 rejection of claims 15 and 22 over Ishigami or Chase.

I. The 102 rejection of claim 31 over Ishigami.

J. The 102 rejection of claim 32 over Ishigami.

K. The 102 rejection of claim 33 over Ishigami.

L. The 103 rejection of claims 34 and 38 over Ishigami.

M. The 103 rejection of claim 35 over Ishigami.

N. The 103 rejection of claim 36 over Ishigami.

O. The 112, first paragraph rejection of claim 31.

P. The 112, first paragraph rejection of claim 34.

Q. The 112, first paragraph rejection of claim 35.

R. The 112, first paragraph rejection of claim 36.

S. The 112, first paragraph rejection of claim 37.

T. The 112, first paragraph rejection of claim 38.

VII. ARGUMENT

A. The 102 rejection of claims 1, 3-5, 7 and 31-33 is improper since positively-recited limitations of the claims are not disclosed in Ishigami.

Referring to independent claim 1, the method recites a hard imaging method comprising *accessing image data corresponding to a hard image to be formed*. The Office refers to col. 4, lines 47-65 of Ishigami as allegedly teaching the claimed accessing. Appellants have failed to uncover any reference to accessing of *image data* in such teachings which may be fairly interpreted to teach image data of the present application which includes content to the hard imaged as discussed below.

Appellants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the teachings of Ishigami.

Claim 1 further recites ***modifying the image data*** *using correction data*. The Office at page 10 of the Action recites col. 2, lines 58-67, col. 3, lines 1-16, and col. 4, lines 30-66 and the image clock generating unit 9 of Ishigami as allegedly teaching the claimed modifying. Applicants respectfully submit that these teachings of Ishigami fail to teach or suggest the claimed limitations of modifying the image data using correction data and the rejection is improper for at least this reason.

In particular, at col. 4, lines 52+ of Ishigami, it is disclosed that the storage unit holds data which corrects distortion in the scanning direction. It is further disclosed that that a chain of *clock pulses* is generated by the image clock generating unit 9 corresponding to the correction data. *Ishigami discloses variation of clock pulses according to the correction data.* In particular, Ishigami discloses that three types of clock pulses are generated corresponding to the correction data including a clock pulse with a reference period, a clock pulse with a period shorter than a reference period and a clock pulse with a period longer than the reference period. At page 10 of the Office Action, the Office also relied upon the teachings of col. 6, lines 25-44 of Ishigami in addition to the teachings relied upon in the April 2006 Office Action. However, these teachings disclose clock generating unit 9 generating image clock pulses and outputting image clock pulses which also fail to teach or suggest *modifying the image data using correction data* as positively claimed.

Applicants respectfully submit that modification of the *clock pulses* of Ishigami fails to teach or suggest *modifying image data* using correction data as positively claimed.

Appellants further respectfully submit that patent application claims are interpreted consistent with the specification. *In re Yamamoto*, 740 F2d 1569, 1571 (Fed. Cir. 1984). Appellants refer to the specification at paragraph 0019 where it is stated that image data includes page description language (PDL) data or any other *data comprising content to be hard imaged*. Appellants respectfully submit that the modification of the *clock signals* of Ishigami may not be fairly interpreted to teach the limitations of *modifying image data using correction data* when the claimed limitations of image data are properly considered in view of the teachings of the specification. As mentioned above the limitations of accessing the image data are also not disclosed by the prior art.

Appellants also refer to the "Response to Arguments" section at pages 2-3 of the Action as well as page 3 of the Advisory Action and note that the *Office relies upon the same teachings as identified above* as allegedly teaching the claimed limitations of *modifying the image data*. Appellants respectfully submit that the rejection is improper for at least the above-mentioned reasons.

Appellants respectfully submit that positively-recited limitations of independent claim 1 and the respective dependent claims thereof are not disclosed nor suggested by the teachings of Ishigami for at least the above-mentioned reasons.

Appellants respectfully request reversal of the 102 rejection of claims 1, 3-5, 7 and 31-33 for at least the above-mentioned reasons.

In addition, Appellants respectfully submit that claims 2, 6 and 34-36 depend from independent claim 1 and are in condition for allowance for the above-mentioned compelling reasons.

B. The 102 rejection of claims 13, 16 and 37 is improper since positively-recited limitations of the claims are not disclosed in Ishigami.

Referring to independent claim 13, the Office Action at page 11 relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, col. 4, line 30-66 and image clock generating unit 9 as allegedly teaching the claimed processing circuitry.

Claim 13 recites the hard imaging device comprises *processing circuitry configured to access image data corresponding to images to be formed using a hard imaging device and to access correction data*. The above-teachings of the image clock generating unit 9 of Ishigami relied upon by the Office teach the *image clock generating unit 9 receives correction data from the storage unit 8* at col. 6, lines 25+ and fail to disclose or suggest the claimed *processing circuitry configured to access image data*.

Appellants refer to the specification at paragraph 0019 where it is stated that image data includes page description language (PDL) data or any other *data comprising content to be hard imaged*. Applicants respectfully submit that the access of correction data by unit 9 fails to teach or suggest the *processing circuitry configured to access image data* as positively-claimed.

Appellants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the teachings of Ishigami.

Claim 13 further recites *the processing circuitry configured to modify the image data according to the correction data to reduce image errors*. The Office relies upon teachings of image clock generating unit 9 of Ishigami as allegedly disclosing the claimed processing circuitry. However, *image clock generating unit 9*

of Ishigami discloses *variation of clock pulses* according to the correction data and Applicants respectfully submit that modification of the clock pulses fails to teach or suggest *the processing circuitry configured to modify the image data according to the correction data to reduce image errors* as positively claimed.

At page 11 of the Office Action, the Office also relied upon the teachings of col. 6, lines 25-44 of Ishigami in addition to the teachings relied upon in the April 2006 Office Action. However, these teachings disclose clock generating unit 9 generating image clock pulses and outputting image clock pulses which also fail to teach or suggest *the processing circuitry configured to modify the image data according to the correction data to reduce image errors* as positively claimed.

Appellants again refer to the specification at paragraph 0019 where it is stated that image data includes *data comprising content to be hard imaged* and Appellants respectfully submit that the modification of the *clock signals* of Ishigami by the image clock generating unit 9 may not be fairly interpreted to teach the limitations of *the processing circuitry configured to modify the image data according to the correction data to reduce image errors* when the claimed limitations of image data are properly considered in view of the teachings of the specification.

Appellants also refer to the "Response to Arguments" section at page 5 of the Action as well as page 3 of the Advisory Action and note that the *Office relies upon the same teachings* as set forth on pages 10-11 of the Office Action as allegedly teaching the claimed limitations of the processing circuitry. Appellants respectfully submit that the rejection is improper for at least the above-mentioned reasons.

Appellants respectfully submit that positively-recited limitations of independent claim 13 and the respective dependent claims thereof are not disclosed nor suggested by the teachings of Ishigami for at least the above-mentioned reasons.

Appellants respectfully request reversal of the 102 rejection of claims 13, 16 and 37 for at least the above-mentioned reasons.

In addition, Appellants respectfully submit that claims 14-15 and 17 depend from independent claim 13 and are in condition for allowance for the above-mentioned compelling reasons.

C. The 102 rejection of claims 18-19 and 23 is improper since positively-recited limitations of the claims are not disclosed in Ishigami.

Referring to independent claim 18, the Office at pages 11-12 of the Office Action relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-24, col. 4, line 30-66 col. 6, lines 25-44 and image clock generating unit 9 of Ishigami as allegedly teaching the claimed processing circuitry. Applicants respectfully submit that the *image clock generating unit 9* of Ishigami discloses generating image clock pulses, outputting image clock pulses, and varying of *clock pulses* according to the correction data. Applicants respectfully submit that the teachings of the image clock generating unit 9 and modification of the clock pulses thereby fails to teach or suggest the claimed *processing circuitry configured to modify the image data and the modification comprises modifying the image data to control the generation of light in a manner to reduce the presence of image errors caused by scanning errors* as positively claimed.

Appellants refer to the specification at paragraph 0019 where it is stated that image data includes page description language (PDL) data or any other *data comprising content to be hard imaged*. Appellants respectfully submit that the modification of the *clock signals* of Ishigami by the image clock generating unit 9 may not be fairly interpreted to teach the limitations of *processing circuitry configured to modify the image data and the modification comprises modifying the image data to control the generation of light in a manner to reduce the presence of image errors caused by scanning errors* when the claimed limitations of image data are properly considered in view of the teachings of the specification.

Appellants also refer to the "Response to Arguments" section at page 6 of the Action as well as page 3 of the Advisory Action and note that the *Office relies upon the same teachings* as set forth on pages 11-12 of the Office Action as allegedly teaching the claimed limitations of the processing circuitry. Appellants respectfully submit that the rejection is improper for at least the above-mentioned reasons.

Appellants respectfully submit that positively-recited limitations of independent claim 18 and the respective dependent claims thereof are not disclosed nor suggested by the teachings of Ishigami for at least the above-mentioned reasons.

Appellants respectfully request reversal of the 102 rejection of claims 18-19 and 23 for at least the above-mentioned reasons.

In addition, Appellants respectfully submit that claims 20-22 and 38 depend from independent claim 18 and are in condition for allowance for the above-mentioned compelling reasons.

D. The 102 rejection of claims 27-28 is improper since positively-recited limitations of the claims are not disclosed in Ishigami.

Referring to independent claim 27, the Office at page 12 of the Office Action relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, and col. 4, line 30-66 of Ishigami and image clock generating unit 9 of Ishigami as allegedly teaching the claimed *accessing image data corresponding to an initial image to be hard imaged using the hard imaging device*. However, the teachings of Ishigami teach the *image clock generating unit 9 receiving correction data from the storage unit 8* at col. 6, lines 25+ and fail to disclose or suggest the claimed *accessing of image data*.

Appellants refer to the specification at paragraph 0019 where it is stated that image data includes page description language (PDL) data or any other *data comprising content to be hard imaged*. Applicants respectfully submit that the accessing of correction data fails to teach or suggest accessing image data as positively-claimed.

Appellants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the teachings of Ishigami.

Furthermore, the Office at pages 12-13 of the Office Action relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, and col. 4, line 30-66 and the image clock generating unit 9 of Ishigami as allegedly teaching the claimed limitations of *modifying the image data responsive to the correction data to improve accuracy of a latent image formed by the optical scanning system responsive to the image data and with respect to the initial image*.

Applicants respectfully submit that the *image clock generating unit 9* of Ishigami discloses generating image clock pulses, outputting image clock pulses, and *varying of clock pulses* according to correction data. Applicants respectfully submit that the teachings of the image clock generating unit 9 and modification of

the clock pulses thereby fails to teach or suggest the claimed *modifying the image data responsive to the correction data to improve accuracy of a latent image formed by the optical scanning system responsive to the image data and with respect to the initial image* especially when the image data limitation is properly interpreted in accordance with the specification.

Appellants also refer to the "Response to Arguments" section at page 6 of the Action as well as page 3 of the Advisory Action and note that the *Office relies upon the same teachings* as set forth on pages 12-13 of the Office Action as allegedly teaching the claimed limitations. Appellants respectfully submit that the rejection is improper for at least the above-mentioned reasons.

Appellants respectfully submit that positively-recited limitations of independent claim 27 and the respective dependent claims thereof are not disclosed nor suggested by the teachings of Ishigami for at least the above-mentioned reasons.

Appellants respectfully request reversal of the 102 rejection of claims 27-28 for at least the above-mentioned reasons.

In addition, Appellants respectfully submit that claims 29-30 depend from independent claim 18 and are in condition for allowance for the above-mentioned compelling reasons.

E. Positively-recited limitations of claim 2 are not disclosed nor suggested by Ishigami or Chase and the 103 rejection is improper.

Claim 2 recites *rasterizing the image data from an initial format to raster image data* and wherein the modifying comprises *modifying the image data being rasterized during the rasterizing* in combination with the modifying comprising modifying using correction data of claim 1. To the contrary of teaching the limitations of claim 2, Ishigami discloses *modification of clock pulses* according to the correction data and fails to teach or suggest the explicitly claimed method of *using correction data to modify the image data being rasterized during the rasterizing*. Appellants refer to the specification at paragraph 0019 where it is stated that image data includes page description language (PDL) data or any other *data comprising content to be hard imaged*. Applicants respectfully submit that the

modification of clock signals of Ishigami fails to teach or suggest modifying the image data as used in the present application.

Referring to page 16 of the Office Action, the Office refers to *raster scanning* teachings of Ishigami in support of the rejection. Appellants respectfully submit that the scanning of data in a raster of Ishigami fails to teach the explicitly claimed limitations. For example, the present application teaches *rasterization of image data in addition to raster scanning*. In particular, Appellants refer to the teachings of paragraphs 0023, and 0028-0029 which teach raster scanning. Raster scanning is the photoconductor receiving the scanned laser beam in a raster pattern per paragraph 0028. However, in addition, paragraphs 0035-0037 explicitly disclose that the processing circuitry 14 may operate as *a raster image processor which performs rasterization* including accepting a high-level description of a page to be printed and producing the binary raster image data which is subsequently used to control the light source 22 off and on during the raster scanning per paragraph 0028. Referring again to paragraphs 0035 and 0037, the raster image processor processes a high-level page description, produces a display list, and rasterizes the display list to produce the binary raster image data which is used to control the light source 22 which is used during the scanning. Accordingly, the specification clearly discloses *initially rasterizing the image data from high level initial image data to provide binary raster image data. Finally, after the image data has been rasterized, the rasterized image data is scanned upon the photoconductor using the light source*.

In addition, per paragraph 0039 of the disclosure, the correction data is used to modify the raster image processor to produce distorted raster image data with the inverse geometric distortion. Paragraph 0039 teaches that the raster image processor is configured *to modify the initial image data using the correction data during rasterization of the image data*.

Per paragraph 0044, *following rasterization of the image data using the correction data*, processing circuitry 14 may output the modified image data comprising raster data to light source 22 *to control the emission of light to form the latent image*.

Accordingly, the specification teaches rasterizing the image data, and after the image data has been rasterized, scanning the already rasterized image data upon

the photoconductor. Appellants respectfully submit that the teachings of Ishigami of merely scanning data fail to teach or suggest the claimed *modifying the image data being rasterized during the rasterizing* when *rasterizing the image data from an initial format to raster image data* is properly interpreted consistent with the explicit teachings of the specification.

The Office has failed to identify any teachings that the correction data of Ishigami is used to modify image data being rasterized during rasterization *from an initial format to raster image data*. Ishigami at col. 4, lines 66+ teaches the image clock generating unit 9 generating three different clock pulses according to the correction data which are used for every dot to define one of three clock pulses. The teachings at page 4 of the Office Action relied upon by the Examiner (col. 6, lines 25-44 of Ishigami) teach modification of clock signals using correction data void of teaching or suggesting modifying image data let alone modifying image data being rasterized during the rasterizing *from an initial format to raster image data*.

Appellants respectfully submit that Ishigami fails to teach or suggest the explicit limitations that the modifying comprises *modifying the image data being rasterized during the rasterizing from an initial format to raster image data* and the *modifying using the correction data.*

Appellants also respectfully submit that the teachings of U.S. Patent No. 6,611,348 to Chase (hereinafter "Chase") fail to teach the above-recited limitations. In particular, Chase fails to disclose or suggest that the *raster image processor of Chase utilizes correction data in any fashion* let alone the claimed limitations of *modifying the image data being rasterized during the rasterizing and the modifying using the correction data corresponding to scanning errors of a scan lens* as explicitly claimed in claims 1 and 2.

Accordingly, Appellants respectfully submit that the teachings of Ishigami and Chase taken alone or in combination fail to disclose or suggest the above identified positively-recited limitations of the claims. Appellants respectfully request reversal of the 103 rejection.

F. Positively-recited limitations of claims 6, 14, and 30 are not disclosed nor suggested by Ishigami or Chase and the 103 rejection is improper.

The claims recite *modifying the image data using a raster image processor* (claim 6) or a *raster image processor modifying the image data* (claims 14 and 30). Referring to the specification of the present application, paragraphs 0035-0037 explicitly disclose that the processing circuitry 14 may operate as a raster image processor which performs rasterization including *accepting a high-level description of a page to be printed and producing the binary raster image data* which is subsequently used to control the light source 22 off and on during the raster scanning per paragraph 0028. Referring again to paragraphs 0035 and 0037, the raster image processor processes a high-level page description, produces a display list, and rasterizes the display list to produce the binary raster image data which is used to control the light source 22 which is used during the scanning. Accordingly, the specification clearly discloses the raster image processor rasterizing the image data from high level initial image data to provide binary raster image data. Finally, after the image data has been rasterized, the rasterized image data is scanned upon the photoconductor using the light source.

The Office at page 17 of the Action refers to scanning of data in a main direction in support of the rejection. However, as used in the present application, the raster image processor accepts a high-level description of a page and produces binary raster data. Subsequent to the image data rasterization operations of the raster image processor, the light source 22 of the present application scans the binary raster data. Appellants respectfully submit that the generic teachings of Ishigami regarding *scanning* in a main direction may not be fairly interpreted to teach or suggest teachings of a *raster image processor* when interpreted consistent with the present application. Ishigami teaches the image clock generating unit modifying clock pulses and fails to teach the image clock generating unit 9 interacting in any way with the image data of Ishigami. Appellants respectfully submit that the image clock generating unit which generates a clock signal void of any reference to unit 9 interacting with the image data may not be fairly interpreted to teach the claimed limitations of *modifying using a raster image processor or a raster image processor using correction data to modify image data (claim 6),*

modifying the image data according to the correction data (claim 14), or modifying the image data according to the correction data (claim 30).

Referring to the teachings of Chase, such fails to disclose or suggest that the raster image processor of Chase utilizes correction data in any fashion let alone the claimed limitations of a *raster image processor using correction data to modify image data (claim 6), modifying the image data according to the correction data (claim 14), or modifying the image data according to the correction data (claim 30).*

Accordingly, Appellants respectfully submit that the teachings of Ishigami and Chase taken alone or in combination fail to disclose or suggest the above identified positively-recited limitations of the claims. Appellants respectfully request reversal of the 103 rejection.

G. Positively-recited limitations of claim 21 are not disclosed nor suggested by Ishigami or Chase and the 103 rejection is improper.

Claim 21 recites (in combination with claim 18) *processing circuitry operating as a raster image processor to modify the image data to control the generation of light in a manner to reduce the presence of image errors.* Referring to the specification of the present application, paragraphs 0035-0037 explicitly disclose that the processing circuitry 14 may operate as a raster image processor which performs rasterization including *accepting a high-level description of a page to be printed and producing the binary raster image data* which is subsequently used to control the light source 22 off and on during the raster scanning per paragraph 0028. Referring again to paragraphs 0035 and 0037, the raster image processor processes a high-level page description, produces a display list, and rasterizes the display list to produce the binary raster image data which is used to control the light source 22 which is used during the scanning. Accordingly, the specification clearly discloses the raster image processor rasterizing the image data from high level initial image data to provide binary raster image data. Finally, after the image data has been rasterized, the rasterized image data is scanned upon the photoconductor using the light source.

The Office at page 17 of the Action refers to *scanning* of data in a main direction in support of the rejection. However, as used in the present application, the raster image processor initially performs rasterization operations and subsequent

to the image data rasterization operations of the raster image processor, the light source 22 of the present application scans the binary raster data. Appellants respectfully submit that the generic teachings of Ishigami regarding scanning in a main direction may not be fairly interpreted to teach or suggest teachings of a raster image processor when interpreted consistent with the present application. Ishigami teaches the image clock generating unit modifying clock pulses and fails to teach the image clock generating unit 9 interacting in any way with the image data of Ishigami. Appellants respectfully submit that the image clock generating unit which generates a clock signal void of any reference to unit 9 interacting with the image data may not be fairly interpreted to teach the claimed limitations of a raster image processor modifying the image data *to control the generation of light in a manner to reduce the presence of image errors*.

Referring to the teachings of Chase, such fails to disclose or suggest that the raster image processor of Chase *modifies the image data to control the generation of light in a manner to reduce the presence of image errors* as explicitly claimed.

Accordingly, Appellants respectfully submit that the teachings of Ishigami and Chase taken alone or in combination fail to disclose or suggest the above identified positively-recited raster image processor of the claim. Appellants respectfully request reversal of the 103 rejection.

H. Positively-recited limitations of claims 15 and 22 are not disclosed nor suggested by Ishigami or Chase and the 103 rejection is improper.

Claims 15 and 22 recite (in combination with the limitations of the respective independent claims 13 and 18) *processing circuitry configured to modify image data to reduce image errors or the presence of image errors*, and the *processing circuitry comprising raster image processing circuitry configured to convert the image data from an initial format to a raster format*.

Paragraph 0037 of the specification provides that the raster image processor may perform rasterization operations such as rasterizing the display list. The raster image processor may calculate an intersection of individual scan lines with primitive graphical objects in the display list and determine which pixels to turn on and turn off to draw individual scan lines. The raster image processor *produces binary raster image data*.

Appellants have failed to uncover any teachings in Ishigami of structure that discloses *processing circuitry both operating as raster imager processing circuitry configured to convert image data from an initial format to a raster format in combination with the processing circuitry configured to modify image data to reduce image errors*. The operations of the image clock generating unit 9 (relied upon by the Office as teaching the claimed processing circuitry) generates clock pulses, does not modify image data, and is not configured to convert the image data from an initial format to a raster format.

Referring to the generic raster image processor teachings of Chase, such fails to disclose or suggest that the claimed raster image processor of Chase is configured *to modify image data according to correction data to reduce image errors or the presence of errors* as explicitly claimed.

Accordingly, Appellants respectfully submit that the teachings of Ishigami and Chase taken alone or in combination fail to disclose or suggest positively-recited limitations of the claims. In particular, none of the references teach the claimed common structure of the processing circuitry configured to modify image data to reduce image errors or the presence of image errors as well as being configured to convert image data from an initial format to a raster format as claimed.

Appellants respectfully request reversal of the 103 rejection for at least the above-mentioned reasons.

I. The 102 rejection of claim 31 is improper since positively-recited limitations of the claims are not disclosed in Ishigami.

Clam 31 recites (in combination with claim 1) *modifying image data using correction data to reduce an introduction of image errors and the modifying comprises modifying content of a representation of the hard image*.

The Office relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, col. 4, line 34-64 col. 6, lines 25-44 and image clock generating unit 9 of Ishigami as allegedly teaching the claimed modifying. The teachings relied upon by the Office disclose *modification of clock signals which are generated by the image clock generating unit 9 using correction data*. Ishigami is void of teaching that the image clock generating unit 9 processes image data in any fashion. In addition, Ishigami is

void of any teaching or suggestion that the image clock generating unit 9 *modifies content of a representation of the hard image*.

Appellants respectfully submit that positively-recited limitations of claim 31 are not disclosed nor suggested by the teachings of Ishigami for at least the above-mentioned reasons. Appellants respectfully request reversal of the 102 rejection.

J. The 102 rejection of claim 32 is improper since positively-recited limitations of the claims are not disclosed in Ishigami.

The claim 32 recites *accessing initial image data, modifying the image data using correction data providing modified data, and wherein the modified image data causes different pixels of a raster to be imaged compared with the initial image data*.

At page 15 of the Office Action, the Office relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, col. 4, lines 34-64 col. 6, lines 25-44 and image clock generating unit 9 of Ishigami as allegedly teaching the claimed modifying. The teachings relied upon by the Office disclose *modification of clock signals which are generated by the image clock generating unit 9 using correction data*. The Ishigami teachings regarding altering the generation of clock signal fail to teach or suggest the above-recited limitations of *modifying the image data using correction data providing modified data, and wherein the modified image data causes different pixels of a raster to be imaged compared with the initial image data*.

Appellants respectfully submit that positively-recited limitations of claim 32 are not disclosed nor suggested by the teachings of Ishigami for at least the above-mentioned reasons. Appellants respectfully request reversal of the 102 rejection.

K. The 102 rejection of claim 33 is improper since positively-recited limitations of the claims are not disclosed in Ishigami.

The claim 33 recites in combination with claim 1 *modifying image data using correction data to reduce an introduction of image errors and that the modifying comprises modifying a graphical object of a display list*.

At page 15 of the Office Action, the Office relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, col. 4, lines 34-64 col. 6, lines 25-44 and image clock generating unit 9 of Ishigami as allegedly teaching the claimed modifying.

The teachings relied upon by the Office disclose *modification of clock signals which are generated by the image clock generating unit 9 using correction data*. The Ishigami teachings regarding altering the generation of clock signal fail to teach or suggest the above-recited limitations of the *modifying image data* or that the *modifying of the image data modifies a **graphical object of a display list*** as claimed. Appellants have *electronically searched Ishigami and failed to uncover any reference to "graphical object" or "graphical object of a display list"* let alone the *modifying the image data comprises modifying a graphical object of a display list* as explicitly claimed.

Appellants respectfully submit that positively-recited limitations of claim 33 are not disclosed nor suggested by the teachings of Ishigami for at least the above-mentioned reasons. Appellants respectfully request reversal of the 102 rejection.

L. Positively-recited limitations of claims 34 and 38 are not disclosed nor suggested by Ishigami and the 103 rejection is improper.

The claims recite *after the modifying, outputting the image data to a light source at a constant rate* (claim 34) or that *modified data is applied to an optical scanning system at a constant rate* (claim 38).

At pages 18-19 of the Office Action, the Office relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, col. 4, lines 34-64 col. 6, lines 25-44 and image clock generating unit 9 of Ishigami as allegedly teaching the claimed limitations with respect to modification of image data. The teachings relied upon by the Office disclose *modification of clock signals which are generated by the image clock generating unit 9 using correction data* and fail to teach the above-recited limitations Appellants further refer to Fig. 11(b) of Ishigami which illustrates the results of the modification of the clock signals. In particular, the upper line shows clocking of the data at a constant rate. However, Ishigami teaches the modification of the clock signals to vary the clocking of the image data as clearly showed by the lower line and including the correction. The timing of the lower line of Fig. 11(b) is in no fair interpretation constant especially when contrasted to the constant clocking of the upper line of Fig. 11(b).

Appellants respectfully submit that the positively recited limitations of *after the modifying, outputting the image data to a light source at a constant rate* and

the *modified data applied to an optical scanning system* *at a constant rate* are not disclosed nor rendered obvious by the explicit teachings of Ishigami of varying of the rate of the clocking of the data in the scanning direction to provide the correction as clearly disclosed by Fig. 11(b) of Ishigami.

Furthermore, the explicit teachings of the *varying of the clock pulses to provide the correction* *explicitly teaches away* *from the claimed limitations of outputting the image data* *at a constant rate*.

Indeed, Appellants respectfully submit that the ***teaching away is the antithesis of the art's suggesting that the person of ordinary skill go in the claimed direction. Essentially, teaching away from the art is a per se demonstration of lack of obviousness***. *In re Dow Chemical Co.*, 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988). Furthermore, MPEP §2143.01 (8th ed.) states if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. MPEP §2143.01 *citing In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Appellants respectfully submit that modifying Ishigami such that the data is clocked at a constant rate would defeat the teachings of Ishigami directed towards modifying the clock for correction of errors.

Appellants respectfully submit that the teachings of Ishigami fail to disclose or suggest the above identified positively-recited limitations of the claims and the teachings of Ishigami teach away from the claimed limitations. Appellants respectfully request reversal of the 103 rejection.

M. Positively-recited limitations of claim 35 are not disclosed nor suggested by Ishigami and the 103 rejection is improper.

Claim 35 recites *modifying image data using correction data to reduce an introduction of image errors* and the *modifying provides modified image data which causes a pixel of one scan line of a raster to be imaged using a pixel of another scan line of the raster*.

The Office states on page 18 of the Office Action that the limitations of *modified image data which causes a pixel of one scan line of a raster to be imaged using a pixel of another scan line of the raster* would have been obvious because pixels obviously will be the same in different scan lines for typical objects.

Appellants respectfully submit that the Office has identified no evidence in support of the cursory statements presented in support of the 103 rejection. To the contrary of the unsupported statements, Ishigami discloses a comprehensive arrangement which varies clock signals to reduce errors. The Office cites no evidence or explanation why one of ordinary skill would be motivated to modify Ishigami in manner which renders the claimed subject matter obvious.

MPEP 2142 states that the concept of prima facie obviousness allocates who has the burden of going forward with production of evidence in each step of the examination process and the *examiner bears the initial burden of* ***factually*** *supporting any prima facie conclusion of obviousness.* MPEP §2142 (8th ed., rev. 6).

To establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. As discussed in *In re Piasecki,* 745 F.2d 1468, 1472, 223 USPQ 785,788 (Fed. Cir. 1984), the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a prima facie case of unpatentability including *some articulated reasoning with some rational underpinning* to support the legal conclusion of obviousness. *KSR Int'l v. Teleflex, Inc.*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007). MPEP 2142 (8th ed., rev. 6) further provides that rejections on obviousness *cannot be sustained with mere conclusory statements*, instead there must be some articulated reasoning with some rational underpinning to support a legal conclusion of obviousness and which must be *factually supported* per MPEP 2142.

Appellants respectfully submit that the teachings of Ishigami fail to disclose or suggest the above identified positively-recited limitations of the claim and the Office has failed to meets its burden to establish that the claimed limitations are obvious. Appellants respectfully request reversal of the 103 rejection.

N. Positively-recited limitations of claim 36 are not disclosed nor suggested by Ishigami and the 103 rejection is improper.

Claim 36 depends from claim 2 and recites that the *modifying during the rasterizing provides a raster to be imaged which is different than a raster provided by rasterizing of the image data without the modifying*.

At pages 18-19 of the Office Action, the Office relies upon the teachings of col. 2, lines 58-67, col. 3, lines 1-16, col. 4, lines 34-64 col. 6, lines 25-44 and image clock generating unit 9 of Ishigami as allegedly teaching the claimed modifying. The teachings relied upon by the Office disclose *modification of clock signals which are generated by the image clock generating unit 9 using correction data*. The Ishigami teachings regarding altering the generation of clock signal are void of any mention of rasterizing. Furthermore, as discussed previously herein, the present application distinguishes rasterizing to provide the raster from the operations of scanning the raster and in no fair interpretation may the varying of clock signals used for scanning be fairly interpreted to teach or suggest the above-recited limitations of the *modifying during the rasterizing provides a raster to be imaged which is different than a raster provided by rasterizing of the image data without the modifying*.

Appellants respectfully submit that the teachings of Ishigami fail to disclose or suggest the above identified positively-recited limitations of the claim and the Office has failed to meets its burden to establish that the claimed limitations are obvious. Appellants respectfully request reversal of the 103 rejection.

O. Claim 31 complies with the written description requirement and the 112, first paragraph rejection is in error.

Appellants added claim 31 during the prosecution of the present application in the Office Action response filed July 12, 2007. At page 15 of the response (in the Remarks section), Appellants clearly stated that new claim 31 was supported at least by Figs. 3-5 and the associated teachings of the specification. However, apparently such portion of the remarks was apparently missed by the Office as the Office Action erroneously stated at page 9 of the Action that Applicants failed to point out where support could be found. Regardless, Appellants respectfully submit

that claim 31 complies with the written description requirement for at least the below-mentioned compelling reasons.

The MPEP states the test for sufficiency of support in an application is whether the disclosure relied upon reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter. MPEP §2163.02 (8th ed., rev. 6) *citing Ralston Purina Co. v Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985). Notably, ***the subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement***. MPEP §2163.02 (8th ed., rev. 6).

Claim 31 recites that the modifying the image data comprises modifying content of a representation of the hard image. Appellants respectfully submit the limitations are supported by and adequately described in the original application as filed. In particular, at paragraph 0035 of the specification it is stated that the image data may be modified. Furthermore, paragraph 0019 states that image data includes page description language (PDL) data (e.g., computer readable list of objects to be hard imaged on a page and may include text and/or line art, for example, along with location, size, color and other attributes of the individual objects), or any other data comprising content to be hard imaged. Paragraph 0045 provides that correction data may be utilized corresponding to the geometrical distortion to modify the raster image data such that latent images subsequently produced using scan lens 28 are correct or satisfactory representations of the initial or original image data before the described modification.

Appellants respectfully submit that the 112 rejection is improper in view of the above-recited authority and the teachings of the original application. Appellants respectfully request withdrawal of the 112 rejection.

P. Claim 34 complies with the written description requirement and the 112, first paragraph rejection is in error.

Claim 34 recites, after the modifying, outputting the image data to a light source at a constant rate, and wherein the light source is configured to generate the light. Once again, Appellants respectfully submit such limitations are supported and adequately described in the original application.

In particular, Appellants refer to the teachings of paragraph 0044 of the original application which provide that *following rasterization of the image data using the correction data*, processing circuitry 14 may output the modified image data comprising raster data to light source 22 to control the emission of light to form the latent image. The ***modified image data may be outputted to light source 22 at a constant rate*** in one embodiment.

Appellants respectfully submit that the 112 rejection is improper in view of the above-recited authority and the teachings of the original application. Appellants respectfully request withdrawal of the 112 rejection.

Q. Claim 35 complies with the written description requirement and the 112, first paragraph rejection is in error.

Claim 35 recites wherein the modifying provides modified image data which causes a pixel of one scan line of a raster to be imaged using a pixel of another scan line of the raster. Appellants respectfully submit such limitations are supported and adequately described in the original application.

Paragraph 0037 of the specification provides that the raster image processor may rasterize the display list. The raster image processor may calculate an intersection of individual scan lines with primitive graphical objects in the display list and determine which pixels to turn on and turn off to draw individual scan lines. The raster image processor produces binary raster image data for output to an image engine 18. Further, paragraph 0040 of the specification provides in one example, a small circle (e.g., 10 or 100 pixels in diameter) may become a small ellipse. The respective axis in the process direction would still be 10 or 100 pixels, but the axis in the scan direction may increase or decrease to cancel the optical distortion. The axis in the scan direction might be 8 or 12 pixels, or 91 or 107 pixels, for example. The geometric description of an ellipse is typically simple enough for a list of primitive graphical objects. Further, paragraph 0043 provides a scan line is not truly one dimensional but may be one pixel high and as many pixels wide as a scan line (e.g., thousands) comprising a rectangle. The modified raster image processor may calculate the intersection of this rectangle with the primitive graphical objects in the display list, producing (to an excellent approximation) a list of one-pixel-high trapezoids and less-than-one-pixel-high triangles as the

intersection. The correction warp may be applied to the vertices of these trapezoids and triangles to produce a new intersection, still comprising a list of trapezoids and triangles. The new intersection may be converted to binary raster image data in the conventional manner.

Appellants respectfully submit that the 112 rejection is improper in view of the above-recited authority and the teachings of the original application. Appellants respectfully request withdrawal of the 112 rejection.

R. Claim 36 complies with the written description requirement and the 112, first paragraph rejection is in error.

Claim 36 recites wherein the modifying during the rasterizing provides a raster to be imaged which is different than a raster provided by rasterizing of the image data without the modifying.

Paragraph 0039 provides processing circuitry 14 may comprise a raster image processor configured to *modify initial image data using the correction data, for example, during rasterization.* Paragraph 0040 provides the raster image processor performs rasterization including *applying the correction warp to the primitive graphical objects in the display list to produce a new display list.* The *new display list contains pre-warped primitive graphical objects which may be rasterized in a conventional manner used to produce the desired binary raster image data.* Appellants respectfully submit that one of skill in the art would understand that the raster provided by the modifying with the correction data (pre-warping of primitive object) would be different than a raster provided without the correction data.

Appellants respectfully submit that the 112 rejection is improper in view of the above-recited authority and the teachings of the original application. Appellants respectfully request withdrawal of the 112 rejection.

S. Claim 37 complies with the written description requirement and the 112, first paragraph rejection is in error.

Claim 37 recites the processing circuitry is configured to modify the image data according to the correction data to provide modified image data, and wherein the accessed image data comprises initial image data, and wherein the modified

image data causes different pixels of a raster to be imaged compared with the initial image data.

Paragraph 0040 of the specification provides in one example, a small circle (e.g., 10 or 100 pixels in diameter) may become a small ellipse. The respective axis in the process direction would still be 10 or 100 pixels, but *the axis in the scan direction may increase or decrease to cancel the optical distortion. The axis in the scan direction might be 8 or 12 pixels, or 91 or 107 pixels, for example.* Appellants respectfully submit that one of skill in the art would understand that the image data modified by the correction data causes different pixels of a raster to be imaged compared with the initial image data.

Appellants respectfully submit that the 112 rejection is improper in view of the above-recited authority and the teachings of the original application. Appellants respectfully request withdrawal of the 112 rejection.

T. Claim 38 complies with the written description requirement and the 112, first paragraph rejection is in error.

Claim 38 recites that the processing circuitry is configured to modify the image data to provide modified image data, and wherein the modified image data is applied to the optical scanning system at a constant rate.

In particular, Appellants refer to the teachings of paragraph 0044 of the original application which provide that processing circuitry 14 may output the ***modified image data at a constant rate*** in one embodiment.

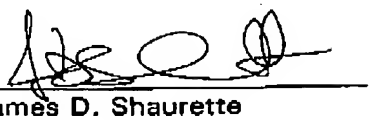
Appellants respectfully submit that the 112 rejection is improper in view of the above-recited authority and teachings of the original application. Appellants respectfully request withdrawal of the 112 rejection.

U. Conclusion

In view of the foregoing, reversal of the rejections of the claims is respectfully requested. For any one of the above-stated reasons, the rejections of the respective claims should be reversed. In combination, the above-stated reasons overwhelmingly support such reversal. Accordingly, Appellants respectfully request that the Board reverse the rejections of the claims.

Respectfully submitted,

Date: 2/27/08

Attorney: 

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VIII. CLAIMS APPENDIX

1. [Previously Presented] A hard imaging method comprising:

accessing image data corresponding to a hard image to be formed;

generating light responsive to the image data;

scanning the light to form a latent image corresponding to the hard image to be formed;

accessing correction data corresponding to scanning errors of a scan lens intermediate a rotating reflection device and a photoconductor; and

modifying the image data using the correction data before the generating, the modifying comprising modifying to reduce an introduction of image errors resulting from the scanning using the scan lens.

2. [Previously Presented] The method of claim 1 further comprising rasterizing the image data from an initial format to raster image data, and wherein the modifying comprises modifying the image data being rasterized during the rasterizing.

3. [Original] The method of claim 1 wherein the scanning comprises scanning using an optical scanning system having the scanning errors comprising geometric distortion of the scan lens, and the accessing comprises accessing the correction data corresponding to the geometric distortion.

4. [Original] The method of claim 3 wherein the accessing comprises accessing the correction data configured to reduce the image errors resulting from the geometric distortion.

5. [Original] The method of claim 1 wherein scanning comprises scanning to form the latent image upon the photoconductor.

6. [Original] The method of claim 1 wherein the modifying comprises modifying using a raster image processor.

7. [Previously Presented] The method of claim 1 further comprising modifying a timing of an outputting of the image data to a light source configured to generate the light.

13. [Previously Presented] A hard imaging device comprising:

processing circuitry configured to access image data corresponding to images to be formed using a hard imaging device, to access correction data corresponding to scanning error of an optical scanning system of the hard imaging device, and to modify the image data according to the correction data to reduce image errors introduced during optical scanning of the image data using the optical scanning system.

14. [Original] The device of claim 13 wherein the processing circuitry operates as a raster image processor to modify the image data.

15. [Original] The device of claim 13 wherein the processing circuitry comprises raster image processing circuitry configured to convert the image data from an initial format to a raster format.

16. [Original] The device of claim 13 wherein the processing circuitry is configured to modify the image data using the correction data corresponding to a geometric distortion of a scan lens of the optical scanning system of the hard imaging device.

17. [Original] The device of claim 16 wherein the processing circuitry is configured to modify the image data using the correction data comprising an inverse representation of the geometric distortion.

18. [Original] A hard imaging device comprising:

an optical scanning system configured to access image data to be used to form a hard image, to generate light corresponding to the image data, and to direct the generated light indicative of the image data to a photoconductor, wherein the optical scanning system produces images upon the photoconductor

which differ from images of the generated light, the difference resulting from scanning errors in the optical scanning system; and

processing circuitry configured to modify the image data prior to application of the image data to the optical scanning system, wherein the modification of the image data comprises modifying the image data to control the generation of light within the optical scanning system in a manner to reduce the presence of image errors in a resultant image formed on the photoconductor and caused by the scanning errors of the optical scanning system.

19. [Original] The device of claim 18 wherein the processing circuitry is configured to modify the image data using correction data, and the correction data corresponds to the scanning errors comprising a geometric distortion of the optical scanning system.

20. [Original] The device of claim 18 wherein the correction data is configured to cause modification of the image data according to an inverse representation of the geometric distortion.

21. [Original] The device of claim 18 wherein the processing circuitry operates as a raster image processor to modify the image data.

22. [Original] The device of claim 18 wherein the processing circuitry comprises raster image processing circuitry configured to convert the image data from an initial format to a raster format.

23. [Original] The device of claim 18 wherein the optical scanning system comprises a system of the hard imaging device comprising an electrophotographic printer.

27. [Previously Presented] An article of manufacture comprising:

a computer-readable medium encoded with computer-readable instructions to cause processing circuitry of a hard imaging device to perform processing comprising:

accessing image data corresponding to an initial image to be hard imaged using the hard imaging device;

accessing correction data corresponding to image errors introduced by an optical scanning system of the hard imaging device and configured to emit light during hard imaging operations;

modifying the image data responsive to the correction data to improve accuracy of a latent image formed by the optical scanning system responsive to the image data and with respect to the initial image; and

outputting the modified image data to the optical scanning system of the hard imaging device.

28. [Previously Presented] The article of claim 27 wherein the instructions cause the processing circuitry to access the correction data comprising correction data configured to reduce the image errors introduced by the optical scanning system.

29. [Previously Presented] The article of claim 27 wherein the instructions cause the processing circuitry to access the correction data comprising correction data comprising an inverse representation of a geometric distortion of the optical scanning system.

30. [Previously Presented] The article of claim 27 wherein the instructions cause the processing circuitry to operate as a raster image processor to modify the image data.

31. [Previously Presented] The method of claim 1 wherein the modifying the image data comprises modifying content of a representation of the hard image.

32. [Previously Presented] The method of claim 1 wherein the accessing comprises accessing the image data comprising initial image data and the modifying provides modified image data, and wherein the modified image

data causes different pixels of a raster to be imaged compared with the initial image data.

33. [Previously Presented] The method of claim 1 wherein the modifying the image data comprises modifying a graphical object of a display list.

34. [Previously Presented] The method of claim 1 further comprising, after the modifying, outputting the image data to a light source at a constant rate, and wherein the light source is configured to generate the light.

35. [Previously Presented] The method of claim 1 wherein the modifying provides modified image data which causes a pixel of one scan line of a raster to be imaged using a pixel of another scan line of the raster.

36. [Previously Presented] The method of claim 2 wherein the modifying during the rasterizing provides a raster to be imaged which is different than a raster provided by rasterizing of the image data without the modifying.

37. [Previously Presented] The device of claim 13 wherein the processing circuitry is configured to modify the image data according to the correction data to provide modified image data, and wherein the accessed image data comprises initial image data, and wherein the modified image data causes different pixels of a raster to be imaged compared with the initial image data.

38. [Previously Presented] The device of claim 18 wherein the processing circuitry is configured to modify the image data to provide modified image data, and wherein the modified image data is applied to the optical scanning system at a constant rate.

IX. EVIDENCE APPENDIX

Appellants submit no evidence with this appellate brief.

X. RELATED PROCEEDINGS APENDIX

Appellants are not aware of any related proceedings.